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On February 13, 2002

By Diana Schaller  
Diana M. Schaller

0300

Attorney Docket No. 0218us210

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Torben Lauesgaard Nissen, *et al.*

Application No.: 10/003,496

Filed: November 1, 2001

For: Single-Chain Polypeptides

Examiner: Unassigned

Art Unit: 1645

COMMUNICATION TO THE EXAMINER  
REGARDING INFORMATION  
DISCLOSURE STATEMENT

U.S. Patent And Trademark Office  
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Sir:

The enclosed references complete the co-filed Information Disclosure Statement,  
providing all remaining references for submission.

Respectfully submitted,

Joanne R. Petithory  
Joanne R. Petithory  
Reg. No. 42,995

Maxygen, Inc.  
Patent Department  
515 Galveston Drive  
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Telephone: (650) 298-5300  
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INFORMATION DISCLOSURE  
STATEMENT UNDER  
37 CFR § 1.97 and § 1.98

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P.O. Box 2327  
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Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Approximately half of the newly cited references on the 1449 are being enclosed with this submission. The additional references are being concurrently mailed under separate cover to facilitate mailing. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the reference be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicants believe that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0990. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

  
Joanne R. Petithory  
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Facsimile: (650) 298-5446

Substitute for form 1449A-B/PTO  P INFORMATION DISCLOSURE STATEMENT BY APPLICANT  FEB 19 2002 85 Use as many sheets as necessary)		Complete if Known			
		Application Number	10/003,496		
		Filing Date	November 1, 2001		
		First Named Inventor	Torben Lauesgaard Nissen		
		Group Art Unit	1645		
		Examiner Name	Unassigned		
		Attorney Docket Number	0218us210		

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	U.S. Patent Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	1	4,810,643		Souza	03/06/1989
	2	4,833,127		Ono et al.	05/23/1989
	3	4,904,584		Shaw	02/27/1990
	4	4,999,291		Souza	03/12/1991
	5	5,214,132		Kuga et al.	05/25/1993
	6	5,218,092		Sasaki et al.	06/08/1993
	7	5,218,093		Guo et al.	06/08/1993
	8	5,281,698		Nitecki	01/25/1994
	9	5,316,921		Godowski et al.	05/31/1994
	10	5,320,840		Camble et al.	06/14/1994
	11	5,349,052		Delgado et al.	09/20/1994
	12	5,362,853		Kuga et al.	11/08/1994
	13	5,399,345		Schumacher et al.	03/21/1995
	14	5,416,195		Camble et al.	05/16/1995
	15	5,476,653		Pitt et al.	12/19/1995
	16	5,547,856		Godowski et al.	08/20/1996
	17	5,580,755		Souza	12/03/1996
	18	5,580,963		Godowski et al.	12/03/1996
	19	5,581,476		Osslund	12/03/1996
	20	5,582,823		Souza	12/10/1996
	21	5,589,456		Smith et al.	12/31/1996
	22	5,676,941		Souza	10/14/1997
	23	5,681,720		Kuga et al.	10/28/1997
	24	5,684,136		Godowski	11/04/1997
	25	5,763,584		Godowski	06/09/1998
	26	5,770,704		Godowski	06/23/1998
	27	5,773,581		Camble et al.	06/30/1998
Examiner Signature				Date Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<p style="text-align: center;">O P E S T A T E M E N T INFORMATION DISCLOSURE STATEMENT BY APPLICANT <b>FEB 1 9 2002</b> C 85 Use as many sheets as necessary)</p>		Complete if Known			
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		Filing Date	<b>November 1, 2001</b>		
		First Named Inventor	<b>Torben Lauesgaard Nissen</b>		
		Group Art Unit	<b>1645</b>		
		Examiner Name	<b>Unassigned</b>		
		Attorney Docket Number	<b>0218us210</b>		

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	28	5,790,421		Osslund	08/04/1998	
	29	5,795,968		Kuga et al.	08/18/1998	
	30	5,824,778		Ishikawa et al.	10/20/1998	
	31	5,824,784		Kinstler et al.	10/20/1998	
	32	5,830,705		Souza	11/03/1998	
	33	5,880,255		Delgado et al.	03/09/1999	
	34	5,985,263		Lee et al.	11/16/1999	
	35	6,004,548		Souza	12/21/1999	
	36	6,027,720		Kuga et al.	02/22/2000	
	37	6,100,070		Zurfluh et al.	08/08/2000	
	38	6,166,183		Ishikawa et al.	12/26/2000	
	39	6,187,564		Sytkowski	02/13/2001	
	40	6,242,570		Sytkowski	06/05/2001	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	41	EP	0 256 843	A1	Cetus Corporation	02/24/1988		
	42	EP	0 335 423	A2	Kyowa Hakko Kogyo Co., Ltd.	10/04/1989		
	43	EP	0 215 126	B1	Chugai Seiyaku Kabushiki Kaisha	07/31/1991		
	44	EP	0 220 520	B1	Chugai Seiyaku Kabushiki Kaisha	09/18/1991		
	45	EP	0 344 796	B1	Chugai Seiyaku Kabushiki Kaisha	09/21/1994		
	46	EP	0 230 980	B2	Chugai Seiyaku Kabushiki Kaisha	03/20/1996		
	47	EP	0 744 409	A1	Kyowa Hakko Kogyo Kabushiki Kaisha	11/27/1996		

Examiner Signature	Date Considered
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Substitute for form 1449A-B/PTO  O P E INFORMATION DISCLOSURE STATEMENT BY APPLICANT FEB 19 2002 P A T E N T & T R A D E M A R K O F F I C E (use as many sheets as necessary)		Complete if Known				
		Application Number	10/003,496			
		Filing Date	November 1, 2001			
		First Named Inventor	Torben Lauesgaard Nissen			
		Group Art Unit	1645			
		Examiner Name	Unassigned			
		Attorney Docket Number	0218us210			

#### FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	48	EP	0 370 205	B1	Kyowa Hakko Kogyo Co., Ltd.	07/22/1998		
	49	EP	0 921 131	A1	Kyowa Hakko Kogyo Co., Ltd.	06/09/1999		
	50	EP	0 237 545	B2	Kirin-Amgen, Inc.	08/25/1999		
	51	EP	0 169 566	B2	Chugai Seiyaku Kabushiki Kaisha	07/12/2000		
	52	EP	0 612 846	B1	Amgen, Inc.	08/16/2000		
	53	WO	89/05824		Genetics Institute, Inc.	06/29/1989		
	54	WO	89/10932		Amgen, Inc.	11/16/1989		
	55	WO	90/12874		Genetics Institute, Inc.	11/01/1990		
	56	WO	91/05798		Amgen Inc.	05/02/1991		
	57	WO	92/06116		Ortho Pharmaceutical Corporation	04/16/1992		
	58	WO	94/20069		Amgen Center	09/15/1994		
	59	WO	96/11953		Amgen Inc.	04/25/1995		
	60	WO	95/21629		Amgen Inc.	08/17/1995		
	61	WO	97/12977		G.D. Searle & Co.	04/10/1997		
	62	WO	98/27230		Maxygen, Inc.	06/25/1998		
	63	WO	98/53072		Korea Research Institute of Bioscience and Biotechnology et al.	11/26/1998		
	64	WO	99/02710		Beth Israel Deaconess Medical Center	01/21/1999		
	65	WO	99/03887		Bolder Biotechnology, Inc.	01/28/1999		

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		Office	Number	Kind Code (if known)				
	66	WO	99/38891		Beth Israel Deaconess Medical Center	08/05/1999		
	67	WO	99/67291		Immunex Corporation	12/29/1999		
	68	WO	00/17336		Lee	03/20/2000		
	69	WO	00/40728		Xencor, Inc.	07/13/2000		
	70	WO	00/44785		Hoffman-La Roche Inc.	08/03/2000		
	71	WO	01/03737	A1	Bolder Biotechnology Inc.	01/18/2001		
	72	WO	01/51510	A2	Maxygen ApS	07/19/2001		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS							
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					T
	73	ARITOMI, MASAHIRO, <i>et al.</i> , "Atomic structure of the GCSF-receptor complex showing a new cytokine—receptor recognition scheme," <i>Nature</i> 401:713-717 (1999)					
	74	BOWEN, SHARON, <i>et al.</i> , "Relationship between molecular mass and duration of activity of polyethylene glycol conjugated granulocyte colony-stimulating factor mutein," <i>Experimental Hematology</i> 27:425-432 (1999)					
	75	HILL, CHRISTOPHER P., <i>et al.</i> , "The structure of granulocyte-colony-stimulating factor and its relationship to other growth factors," <i>Proc. Natl. Acad. Sci. USA</i> 90:5167-5171 (1993)					
	76	HORAN, TOM, <i>et al.</i> , "Dimerization of Extracellular Domain of Granulocyte-Colony Stimulating Factor Receptor by Ligand Binding: A Monovalent Ligand Induces 2:2 Complexes," <i>Biochemistry</i> 35:4886-4896 (1996)					
	77	LANDAR, AIMEE, <i>et al.</i> , "Design, Characterization, and Structure of a Biologically Active Single-chain Mutant of Human IFN-γ," <i>J. Mol. Biol.</i> 299:169-179 (2000)					

Examiner Signature		Date Considered	
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Substitute for form 1449A-B/PTO  I P INFORMATION DISCLOSURE STATEMENT BY APPLICANT FEB 19 2002 PATENT & TRADEMARK OFFICE (use as many sheets as necessary)		Complete if Known	
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		First Named Inventor	Torben Lauesgaard Nissen
		Group Art Unit	1645
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	78	LEONG, STEVEN R., <i>et al.</i> , "IL-8 single-chain homodimers and heterodimers: Interactions with the chemokine receptors CXCR1, CXCR2, and DARC," <i>Protein Science</i> 6:609-619 (1997)	
	79	LI, JUN, <i>et al.</i> , "Mutants of Single Chain Interleukin 5 Show Asymmetric Recruitment of Receptor $\alpha$ and $\beta_c$ Subunits," <i>J. Biol. Chem.</i> 271(49):31729-31735 (1996)	
	80	LI, JUN, <i>et al.</i> , "Single Chain Human Interleukin 5 and Its Asymmetric Mutagenesis for Mapping Receptor Binding Sites," <i>J. Biol. Chem.</i> 271(4):1817-1820 (1996)	
	81	NAGATA, SHIGEKAZU, <i>et al.</i> , "Molecular cloning and expression of cDNA for human granulocyte colony-stimulating factor," <i>Nature</i> 319:415-418 (1986)	
	82	PAIGE, AIMEE G., <i>et al.</i> , "Prolonged Circulation of Recombinant Human Granulocyte-Colony Stimulating Factor by Covalent linkage to Albumin Through a Heterobifunctional Polyethylene Glycol," <i>Pharm. Res.</i> 12(12):1883-1888 (1995)	
	83	RANDAL, M., <i>et al.</i> , "Crystallization and preliminary X-ray analysis of a 1:1 complex between a designed monomeric interferon-gamma and its soluble receptor," <i>Protein Sci.</i> 7:1057-1060 (1998)	
	84	REIDHAAR-OLSON, John F., <i>et al.</i> , "Identification of Residues Critical to the Activity of Human Granulocyte Colony-Stimulating Factor," <i>Biochemistry</i> 35:9034-9041 (1996)	
	85	SATAKE-ISHIKAWA, R., <i>et al.</i> , "Chemical Modification of Recombinant Human Granulocyte Colony-Stimulating Factor by Polyethylene Glycol Increases its Biological Activity <i>in vivo</i> ," <i>Cell Structure and Function</i> 17:157-160 (1992)	
	86	SOUZA, LAWRENCE M., <i>et al.</i> , "Recombinant Human Granulocyte Colony-Stimulating Factor: Effects on Normal and Leukemic Myeloid Cells," <i>Science</i> 232:61-65 (1986)	
	87	YAMASAKI, M., <i>et al.</i> , "Effect of Divalent Polyethylene Glycol Units, Conjugated on Human Granulocyte Colony-Stimulating Factor, on Biological Activities <i>In Vitro</i> and <i>In Vivo</i> ," <i>Drugs Exptl. Clin. Res.</i> 24(4):191-196 (1998)	
	88	ZINK, THOMAS, <i>et al.</i> , "Structure and Dynamics of the Human Granulocyte Colony-Stimulating Factor Determined by NMR Spectroscopy. Loop Mobility in a Four-Helix-Bundle Protein," <i>Biochemistry</i> 33:8453-8463 (1994)	
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